

Information on the Corrosion Resistance of Synthetic Resin-impregnated Graphite GAB GPX

Technical Information

The chemical resistance of synthetic resin-impregnated graphite in the GAB GPX1, GPX1T and GPX2 series equals or surpasses that of the N, NS1 and NS2 series.

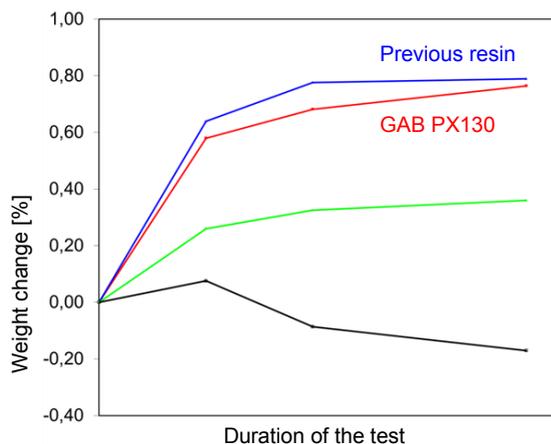
Due to its lower resin content, the chemical resistance of GPX1 material is greater as compared to previously used N, NS1 and NS2 grades.

In fact, the very same raw materials (graphite, phenol formaldehyde resins) are used. The composition and physical properties (e.g. grain size, pore size distribution) of the GAB GPX material are at least equivalent to the previously used graphite grades N, NS1 and NS2.

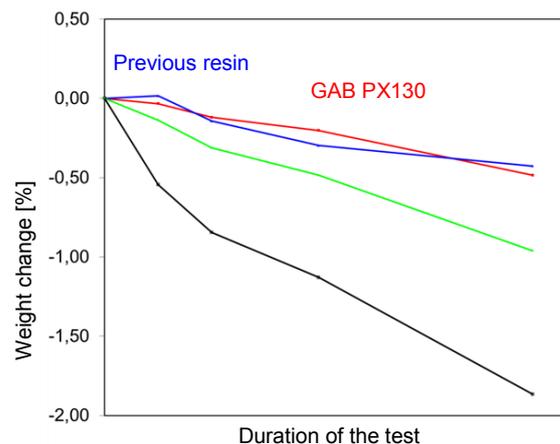
For more details, see GAB works standard WS1414.

The chemical composition of GAB HX 130 phenol-formaldehyde resin is equivalent to that of the previously used P91/1 resin.

Specific, comparative aging tests have been carried out with the formerly used materials and with GAB GPX in order to verify their properties and resistance.



Boiling HCl 20% (approx. 108°C / 226°F)



Boiling Trichlorethylene (approx. 87°C / 188°F)

Source: Research report on outsourcing tests as part of material appraisals (Bayer Technology Services, 2013)

The new material matrix (in red) behaves almost congruently to the previously used system (blue) as far as corrosion resistance is concerned. Other comparison systems (in green and black) behave significantly differently.

Based on these findings, synthetic resin-impregnated graphite grades GAB GPX1, GPX1T and GPX2 can be assumed to have a chemical resistance which is at least equivalent to graphite grades N, NS1 and NS2.

The thermal resistance as well as the mechanical strength values are also at least as high as the values of the N, NS1 and NS2 grades (cf. GAB works standard WN1414, basis material appraisal TÜV SÜD).

Further information is available at www.gab-neumann.com or by contacting us directly.

